

which exhibit the grey bar across the wing. Of these four females, one, now preserved in the Norwich Museum, was obtained in Natal by Mr. Ayres, who marked it as a female; a second, also ticketed as a female, died at Knowsley, and is now in the Derby Museum at Liverpool; and the two others, both marked as females by the collectors, and preserved in the British Museum, were obtained, the one by Mr. Petherick in Kordofan, the other by Mr. Blanford at Bedjak in Abyssinia. This last specimen, I may add, has, by a clerical error, been entered in the list of specimens, at p. 301 of Mr. Sharpe's volume, as a male.

In conclusion, it may be useful to note that, in both editions of Mr. Layard's 'Birds of South Africa,' an error has by some accident crept into the account there given of the adult plumage of *H. ecaudatus*, which is described as having "the lesser wing-coverts rufous." They are always, so far as I have observed, a of lustrous stone-coloured brown, darker in some individuals than in others, but never in any degree rufous.

[To be continued.]

XXV.—*Preliminary Remarks on the Neotropical Pipits.*

By P. L. SCLATER, M.A., Ph.D., F.R.S.

(Plate X.)

IF the Pipits of the Palearctic Region, and even those of Europe, are not yet fairly understood, as would seem evident by what has been lately written on them by Mr. Seebohm, Mr. Dresser, and other ornithologists, how much less likely is it that we should be well acquainted with those of South America? The latter are indeed in a sad state of confusion; and though I have been collecting American Pipits for many years, and endeavouring to get together a good series of specimens from authentic localities, it is only now that I feel in a position to improve matters a little by putting forward the conclusions I have come to in the shape of a preliminary revision of such of the species as are found within the limits of South and Central America.

I may state that my remarks are based mainly upon the specimens in my own collection (which are 33 in number, and embrace examples of all the species recognized in this paper), and on those in the collection of Messrs. Salvin and Godman.

But I have also examined the specimens in the Jardin des Plantes at Paris; and I have much to thank M. Taczanowski (of Warsaw), Hr. von Pelzeln (of Vienna), Mr. J. A. Allen (of Cambridge, Mass.), and Prof. Baird (of Washington) for the valuable assistance they have rendered me by the loan of specimens from the several collections under their charge respectively.

We will first clear off the Nearctic Pipits by saying that only two birds of this group are as yet known to be found within that region, namely *Anthus ludovicianus* and *Neocorys spragueii**. Of these only *Anthus ludovicianus* intrudes into the Neotropical Region, extending as far south as Guatemala†.

Besides *Anthus ludovicianus*, I am able to recognize only six distinct species of Neotropical *Anthi*, which I now proceed to discuss as follows:—

1. ANTHUS BOGOTENSIS.

Anthus rufescens, Lafr. et D'Orb. Syn. p. 27; D'Orb. Voy. p. 226 (nec *A. rufescens*, Temm.).

Anthus bogotensis, Scl. P. Z. S. 1855, p. 109, pl. 101, et p. 144, 1858, p. 550, et Cat. A. B. p. 24; Baird, Rev. A. B. p. 157; Scl. et Salv. P. Z. S. 1870, p. 780 (Merida); Tacz. P. Z. S. 1874, p. 509 (Peru); Wyatt, Ibis, 1871, p. 322 (paramo of Pamplona).

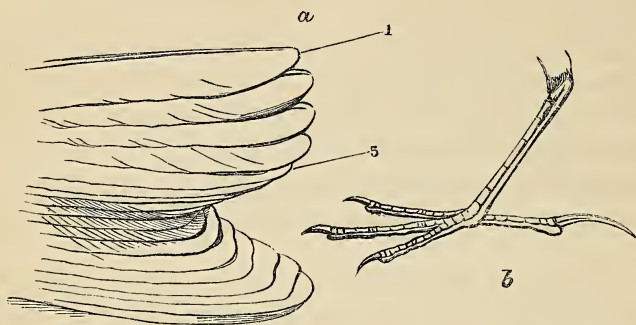
This is a very well-marked and unmistakable species, distinguished at once from its congeners by its dark rufous colour above, variegated with black, by the uniform cinnamonous rufous below, with only a few stripes on the breast and fore neck, and especially by the "wing-end" being formed by five primaries instead of four, the fifth primary

* The European *Anthus pratensis* has occurred accidentally in Greenland, and at Norton Sound, Alaska. Cf. Baird, Brewer, and Ridgway, 'North American Birds,' i. p. 173.

† Salvin, 'Ibis,' 1859, p. 9.

being but slightly shorter than the first four, which are equal and longest*.

Fig. 1.



a. Wing-end of *Anthus bogotensis*, from within.
b. Foot of ditto.

This Pipit appears to be exclusively an inhabitant of the grassy districts on the higher Andes. It was first discovered by D'Orbigny in Bolivia, on the grassy plateau of Biscachal, not far from Carcuata, in the province of Yungas, at an elevation of about 10,000 feet above the sea-level. I have examined D'Orbigny's type in the Paris Museum. Mr. Buckley obtained specimens at Sical, in Bolivia, which are now in Salvin and Godman's collection. Mr. Jelski met with it at Maraynioc and Junin, in Central Peru; one of his skins is in my collection. Mr. Fraser obtained a single example (also in my collection) in June 1858, in Ecuador, near Titiacun, high up on the volcano El Altar, "running on the ground amongst the grass;" and I have other examples from the district of Quito. Further north Mr. Wyatt obtained the same species on the Paramo of Pamplona, U. S. of Columbia, and Mr. Goering near Merida, in Venezuela, "in the upper Paramo region;" so that it is doubtless widely distributed over the higher Andes of South America.

My original description of *Anthus bogotensis* was based upon "Bogota" skins, of which I have seen many. I have

* Cf. Baird (Rev. Am. Birds, p. 157), who has consequently made this species the type of his genus *Pediocorys*.

retained the name, although subsequent to D'Orbigny's, so as to avoid the confusion of this species with *Anthus rufescens* of Temminck.

2. ANTHUS CHII.

El chii, Azara, Apunt. ii. p. 6, no. cxlvi.

Anthus chii, Vieill. N. D. xxvi. p. 490, et E. M. p. 326 (?) ; D'Orb. Voy. Ois. p. 225 (?) ; Darwin, Zool. Beagle, iii. p. 85 (?) ; Licht. Doubl. p. 37 (certè).

Anthus rufus, Pelz. Orn. Bras. p. 69.

Anthus turdinus, Merrem, Ersch u. Grub. Enc. iv. p. 290 (ex Azara).

It is of course quite impossible to say positively what the "Chii" of Azara, and consequently the *Anthus chii* of Vieillot, may have been. All we can decide from Azara's description is that the "Chii" (thus designated by him from its note when it descends to the ground from the air) is a second species of Paraguayan *Anthus*, smaller than the "Correndera"*. By many authors *A. chii* has been considered to be the same as the next species. But the specimen which I received some years ago, in exchange from the Berlin Museum, under this name, and which is consequently, at all events, the *A. chii* of Lichtenstein, is not identical with the little *A. rufus*, but is decidedly larger and distinct.

Anthus chii, then, if this be its correct name, is a bird much resembling *A. bogotensis*, but decidedly smaller in size. The under surface is nearly uniform pale fulvous, paler on the throat and belly, but not passing into white or yellowish white on the latter part as in *A. rufus*.

Besides the specimen received from Berlin, as above mentioned, which was collected by Sello in Southern Brazil or Uruguay, I have seen but two examples of this species, both bearing Natterer's number 463. Of one of them in my own collection the exact locality is not marked ; the other, which Hr. v. Pelzeln has kindly lent me, is from Curytiba.

This is consequently the "*Anthus rufus*, Gmel.," of Pelzeln, but not the *A. rufus* commonly so called. Natterer met

* Length $4\frac{5}{8}$, instead of $5\frac{5}{8}$ Spanish inches.

with it on the steppes (*i. e.* campos) of Inner Brazil, near Curytiba, and says that its song is different from that of the Rio bird, which dwells in the swamps (*i. e.* the next species)*. In both my specimens the wings are not quite perfect; but, so far as I can judge by them, the fifth primary is but very slightly shorter than the fourth (as in *A. bogotensis*); and this is decidedly the case in the skin belonging to the Vienna Museum.

The dimensions of the three specimens are as follows:—

	Long. tota.	Alæ.	Caudæ.	Dig. post. lin. dir.
	in.	in.	in.	in.
a. Mus. P. L. S. ex Mus. Berol. (<i>Sello</i>)..	4·9	2·8	1·9	..
b. ————— (<i>Natt.</i>)	5·2	2·9	2·2	·4
c. Mus. Vindob. (<i>Natt.</i>)	4·9	2·9	2·2	·4

On the whole, I think it extremely probable that this species is the true “Chii” of Azara, as it is much more likely that this bird of the Pampas should occur in Paraguay than the next-following species, which has not yet been recognized so far south.

† 3. ANTHUS RUFUS.

Le variole, Buff. Hist. Nat. v. p. 348.

Petite alouette de Buenos Ayres, Buff. Pl. Enl. 738. fig. 1.

Alauda rufa, Gm. S. N. i. p. 798.

Alauda bonariensis, Bonn. Enc. Méth. p. 317 (ex Buffon).

Anthus rufus, Merrem, Ersch u. Grub. Enc. iv. p. 290; Burm. Syst. Ueb. iii. p. 118; Lawr. Ann. L. N. Y. vii. p. 322; Baird, Rev. A. B. p. 156; Scl. et Salv. P. Z. S. 1868, p. 173, et p. 568 (W. Peru).

Anthus parvus, Lawr. Pr. Ac. Phil. 1865, p. 106; Salv. P. Z. S. 1867, p. 135.

Anthus chii, Spix, Av. Bras. i. p. 75, pl. lxxvi. fig. 2 (?) ; Max. Beitr. iii. p. 631 (?) ; Pelzeln, Orn. Bras. p. 69 (certè) ; Scl. et Salv. P. Z. S. 1867, p. 569; Tacz. P. Z. S. 1874, p. 506 (Lima).

Anthus lutescens, Lesson, Tr. d’Orn. p. 424† (descr. nulla).

* Pelzeln, Orn. Bras. l. s. c.

† Cf. Pucheran, Arch. d. Mus. vii. p. 343.

Anthus peruvianus, Nicholson, P. Z. S. 1878, p. 291 (?)

This little *Anthus* is at once recognizable by its small size, the wing barely exceeding $2\frac{1}{2}$ inches in any specimens, and being generally less. It is with some hesitation that I continue to use for it the name "*rufus*," bestowed by Gmelin upon the "*Petite alouette de Buenos Ayres*," otherwise "*Le variole*" of Buffon. If the bird so designated was really obtained by Commerson upon the banks of the Rio de la Plata, as Buffon tells us, it is much more likely to have been *A. correndera*; and Burmeister has actually applied Gmelin's term to the latter species. But errors in locality are not very uncommon in Buffon's works, as every one knows; and, taking this view, I will continue to call this little species by the name applied to it by Messrs. Lawrence and Baird. This is the more convenient because I have just shown that the name *chii*, often used for it, most probably belongs elsewhere.

Anthus rufus, then, as we will call it, has an extensive range. It is not uncommon in Rio collections, and is, I believe, the only species found in that part of Brazil. Natterer obtained ten examples of it near Rio, "on the puddles in the roads and in the swamps" (no. 168 of his collection). In Salvin and Godman's collection is a skin forwarded from Bahia by Dr. Wucherer. Proceeding northwards, I have a skin of this species obtained by Mr. Wallace on the island of Mexiana, at the mouth of the Amazons, where, Mr. Wallace tells us, it is "tolerably plentiful on the open dry plains." From Guiana I have seen but a single immature specimen, in the collection of the Smithsonian Institution (no. 70,695). A single skin in my own collection is labelled Trinidad, but was perhaps obtained in the savannahs of the opposite coast of Venezuela, whence many "Trinidad" skins are certainly derived. I have also before me two specimens from Panama (one of which is the type of *A. parvus* of Lawrence) and one from Veragua; and I fully share Mr. Salvin's views (given P. Z. S. 1867, p. 135) as to the difficulty of separating these from Brazilian examples.

Going now to the west coast of South America, I have

under my eyes three skins from Lima (*Nation*), and two from Southern Peru, Islay, and Arequipa (*Whitely*), which belong to the recently described *A. peruvianus* of Mr. Nicholson. After examining them, and considering the differential characters pointed out by Mr. Nicholson, I do not find these characters hold when the whole series is examined. In one of my Lima skins the outer tail-feathers are quite as white as in Brazilian specimens; and there is every variety as regards the white edgings of the wing-coverts, taking the series as a whole, though this feature is most pronounced in the Peruvian birds, and least apparent in the Central-American specimens. I admit that the yellow tinge of the abdomen is not apparent in the so-called *A. peruvianus*; but this is, in my opinion, not sufficient to found a species upon, and this tinge is likewise deficient in the Central-American skins.

The length of the hind claw in my ten specimens of this species varies from 0.50 to about 0.38 inch.

If the three forms of this species shall be ultimately established as distinct, it would be better to reject the term *rufus* altogether as void for uncertainty, and to use *lutescens* for the Brazilian form, *parvus* for the Central-American, and *peruvianus* for the Western bird.

4. ANTHUS CORRENDERA.

La correndera, Azara, Apunt. ii. p. 2.

Anthus correndera, Vieill. N. D. xxvi. p. 491, et E. M. p. 325; D'Orb. Voy. Ois. p. 225; Darwin, Zool. Beagle, iii. p. 85; Sel. Cat. A. B. p. 24; id. P. Z. S. 1860, p. 384 (Falklands), 1867, p. 321 (Chili), 1872, p. 548 (Rio Negro); Sel. et Salv. P. Z. S. 1868, p. 139 (Buenos Ayres); Hudson, P. Z. S. 1873, p. 771 (habits); Gould, P. Z. S. 1859, p. 95 (nest).

Anthus rufus (Gm.), Burm. La Plata-Reise, ii. p. 474.

Anthus —, Baird, Rev. Am. B. p. 158.

Corydalla chilensis, Less. Descr. d. Mamm. et Ois. p. 298.

Anthus calcaratus, Tacz. P. Z. S. 1874, p. 507 (?).

In Chili, Patagonia, and all over the pampas of Buenos Ayres this Pipit appears to be abundant. Mr. Hudson

(*l. s. c.*) has given us an excellent account of its habits in the Argentine Republic, and says it is the only *Anthus* known to him there. I have an example obtained by him near Conchitas, a series of four from Santiago, Chili (*Landbeck*), and a single skin from the Falkland Islands, besides an odd Chilian specimen. In these birds, and in others now before me, there is considerable variation in the length of the hind claw; but as a general rule the hind claw is long and rather straight, measuring in the longest-clawed specimens 0·7 inch in a straight line from the base to the tip, but in others not quite reaching 0·5.

As a general rule, the second anterior rectrix in *A. correndera* is white at its tip; and this white colour is continued in a narrow line along the inside of the shaft, nearly down to the base of the feather, the shaft itself being white down quite to the base. But in a large series there will be found exceptions to this rule. In some cases the white line extends only halfway down the feather; and in one of my specimens (♂ adult, ex Chili, *Landbeck*) it extends only about a third down on one side, and two thirds on the other, which proves that this is a variable character.

Mr. Taczanowski has most kindly sent me for examination the type of his *Anthus calcaratus*. My impression is that this is a freshly-moulted example of the present species. The outer rectrix is wholly white, with a black patch on the inner web at the base; and the second rectrix is coloured quite after the usual pattern of *A. correndera*. The specimen is certainly rather more rufescent on the breast than any example of *A. correndera* I have seen; but I think this may be due to its recent moult, as is the case in other Pipits. In the length of the hind claw it is exceeded by some of Mr. Hudson's Buenos-Ayres specimens. The fifth primary is about equal to the first in length, the sixth being rather more than 0·2 inch shorter.

I have also carefully examined the two skins (21,035 and 26,362 of the Smithsonian Institution) described by Prof. Baird in his 'Review,' p. 158, but not named, and have come to the conclusion that they must be referred to this species.

I have no doubt that Prof. Baird is correct in supposing that the latter is of the same origin as the former (Uruguay), and did *not* come from any part of North America. These two specimens are peculiar in having the breast-spots nearly lineiform, and not expanded into arrow-heads. This is especially the case in no. 21,035. But I can very nearly match this in other skins. The hind claw in both specimens is rather short; and there is but a slight extension of the white line downwards in the second external rectrix. As regards the conformation of the primaries, upon which Prof. Baird lays so much stress, I find on examining a large series of *A. correndera* much variation in this part of the structure. The fifth primary is generally rather shorter than the first, and the second, third, and fourth nearly equal and longest. But in some skins the first primary fully equals, and even exceeds, the next three in length; and the fifth is then definitely shorter than the first four.

5. ANTHUS FURCATUS.

Anthus furcatus, Lafr. et D'Orb. Syn. Av. p. 27; D'Orb. Voy. Ois. p. 227; Darwin, Zool. Beagle, iii. p. 85 (La Plata).

Anthus brevirostris, Tacz. P. Z. S. 1874, p. 507 (Peru).

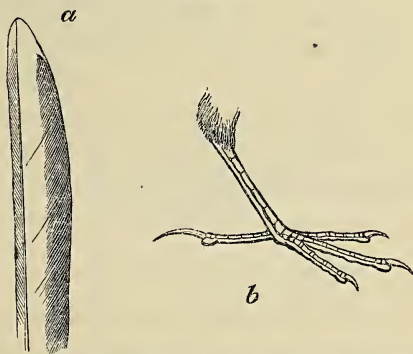
I have compared one of Mr. Taczanowski's specimens of his *Anthus brevirostris* with the type of *A. furcatus* at Paris, and believe I may say that they belong to the same species. Whether, however, it will be ultimately possible to keep this form distinct from *A. correndera* I am not quite so certain. One of Mr. Hudson's skins from Conchitas in my collection and two others in the Smithsonian series, all marked "Cachila" by Mr. Hudson, and not distinguished by him from *A. correndera*, certainly cannot be separated from *A. furcatus*.

The characters of this species (if, as I say, it is to be kept distinct) are the smaller bill, short and more curved hind claw, less spotted under surface, and different markings of the second outer rectrix. There are slight variations in all these points, which render it difficult, to say the least of it, to decide in every case to which of the two species a particular specimen

is to be referred, though when two such extremes are compared as Taczanowski's *A. calcaratus* and *A. brevirostris* it is somewhat startling to affirm that they ought to be put together. For the present, at any rate, I keep them distinct.

In *A. furcatus*, then, the outer rectrix is pure white, with a broad black patch on the inner web, beginning at the base, and extending up to within one third of the length of the feather from the tip. Towards the tip there is likewise more or less indication of a narrow black patch on the outer web. In the second rectrix (see fig. 2*a*) there is a very clear and

Fig. 2.



a. Second left outer rectrix of *A. furcatus* (lower surface).

b. Foot of ditto.

distinct broad white line along the inner side of the shaft, the remaining (outer portion) of the inner web being quite black. This is obviously a mere augmentation of the corresponding colours in *A. correndera*; but the colours are much more definite.

D'Orbigny gives Patagonia and High Bolivia as the patria of his *Anthus furcatus*. If my views as to his species are correct, it also occurs near Buenos Ayres and in Central Peru, having nearly the same range as *A. correndera*. The question is, Is it really separable from that species?

In three examples of *A. furcatus* before me the two middle rectrices are slightly shorter than the others, and the tail may be said to be slightly forked. But I also observe this feature in some specimens of *A. correndera*.

6. *ANTHUS NATTERERI*, sp. nov. (Pl. X.)*Anthus correndera*, Pelz. Orn. Bras. p. 69 (Natt. no. 441).

The bird which Hr. v. Pelzeln has placed, in his excellent memoir on Natterer's collection, under the name *A. correndera* seems to me to be quite distinct from that species; and I propose to rename it after its discoverer. I have one skin in my own collection, received in exchange from Vienna; and Hr. v. Pelzeln has kindly lent me a second.

Fig. 3.

*a.* Head of *Anthus nattereri*.*b.* Foot of ditto.

N.B. In the plate (Pl. X.) the bill is made rather too large.

The short thick bill (fig. 3*a*) seems to render this bird distinct from any other American species known to me. The plumage is altogether more tawny or rufous; there is a pretty distinct eye-stripe; the striæ on the breast are few and lineiform; and the legs are rather stout. The hind claw is unfortunately imperfect in one specimen; in the other it is long and slender (see fig. 3*b*).

The wings are shorter than in *A. correndera*. The first four primaries are equal, or nearly so, in length; and the fifth is about $\cdot 125$ inch shorter, the sixth more than as much shorter again. But too much stress should never be placed upon wing-formulæ, as the proportions will always be found to vary when a series is examined.

The tail is rounded at the end, and the feathers are very pointed. The outer rectrix is pale smoky, with a slight black elongated patch towards the base on the inner

web. This black patch is much increased in the second rectrix, occupying more than half the web, and leaving only a smoky white line along the shaft, which increases in breadth towards the tip. There is a slight white tip to the third outer pair, the rest of which, along with the six others, is black, the two middle rectrices being margined with rufous, like the back.

The following are the principal measurements of the two specimens :—

	Long. tota. in.	Alæ. in.	Caudæ. in.	Tarsi. in.	Ung. post. in.
Mus. P. L. S.	5·4	2·9	2·5	0·9	0·7
Mus. Vindob	5·0	2·8	2·2	0·2	..

In the latter specimen the tail-feathers are not quite fully developed, I think.

Natterer obtained his specimens of this *Anthus* during his third journey, in the south of the province of Sao Paulo in July and August 1820, at Pescaria, Rio Verde, and Ytarare. He remarks that it frequents the grassy plains, and likes to run on the roads.

According to our present state of information, therefore, I am inclined to discriminate six species of Neotropical Pipits (not counting *Anthus ludovicianus*, which only occurs in Guatemala), somewhat as follows :—

a. Bill slender ; tail-feathers rounded.

a'. External rectrices smoky ; under surface of body tawny.

 { larger, wing 3·2 1. *A. bogotensis*.
 { smaller, wing 2·8..... 2. *A. chi*.

b'. External rectrices white ; under surface of body white or yellowish.

a". Very small, wing 2·5 3. *A. rufus*.

b". Larger, wing 3·0 to 3·2.

 { hind claw long and straight 4. *A. correndera*.
 { hind claw short and curved 5. *A. furcatus*.

b. Bill stout ; tail-feathers pointed 6. *A. nattereri*.

These characters may seem somewhat undecided perhaps, but not more undecided, I think, than the species themselves to which I have applied them.



J.Smit lith.

Hanhart imp

+ ANTHUS NATTERERI.